

**December 2003 Progress Report  
for the Tennessee Portion of the Chattanooga Early Action Compact Area**

As required by the April 4, 2003 letter from Lydia Wegman our next progress report is to show the:

- ❖ Control Measures still under consideration for adoption by the local area as part of the March 2004 submission;
- ❖ Likely implementation dates for the local control measures that are under consideration;
- ❖ Current assessment of the amount of emissions reductions expected to be achieved through implementation of the local control measures; and
- ❖ The geographical area in which each control measure is anticipated to apply.

**Control Measures Still Under Consideration**

1. Diesel Retrofit
2. Bike trails and bike racks at work sites.
3. Pedestrian greenways
4. Lower Truck Speed Limits on Interstates
5. Stage 1 Vapor recovery
6. Open Burning Restrictions
7. Ozone Action Days
8. Encourage development of infrastructure and conversion to alternate-fuel vehicles
9. Support state effort to develop NO<sub>x</sub> RACT
10. Encourage accelerated replacement of on and off road diesel vehicles
11. Encourage use of catalysts and on road diesel fuel in off road diesels
12. Support the use of cetane diesel fuel-additive
13. Support lower Reid Vapor Pressure (RVP) gasoline

14. Participate in regional initiatives to seek early introduction of ultra-low sulfur diesel fuel.

15. Support giving preference to bidders on state jobs with repowered, rebuilt or refueled diesel equipment.

16. Use of Intelligent Transportation Systems (ITS)

Evaluation of possible near-term emissions reductions from the local control measures on the previously submitted list has been completed. One item, Road Construction Congestion Mitigation Management, was found to have limited emissions reduction potential, but will be pursued through dynamic message signs and a system of cameras as part of the area's intelligent transportation system even though we are unable to demonstrate significant emissions reductions for purposes of attainment.

Two measures on the June list are being developed or implemented at this time:

Work is underway to start public education efforts for our Ozone Action Days program. A public education campaign is scheduled to start in the spring of 2004 in order to have a real impact by 2005.

Bike trails and bike racks at work sites is a program that is already being implemented. About half of the downtown worksite bike racks have been installed. Bike racks have been placed on the Chattanooga Area Transportation Authority (CARTA) buses. Use of the bike racks has increased each month since they were installed. From April through October, a total of 652 bicycles have been transported on the buses. Prior to that, there was no mechanism for bicyclists to ride the bus as part of their commuting.

The following controls are still under consideration in the Tennessee portion of the early action compact area. These measures are either voluntary or would have to be implemented by governmental entities other than local government.

1. Encourage development of infrastructure and conversion to alternate-fuel vehicles;
2. Encourage accelerated replacement of on- and off-road vehicles;
3. Encourage use of catalysts and on-road diesel fuel in off-road diesels;
4. Support the use of cetane diesel fuel additive;
5. Support lower Reid Vapor Pressure (RVP) gasoline;
6. Participate in regional initiatives to seek early introduction of ultra-low sulfur diesel fuel; and
7. Support giving preference to bidders on state jobs with re-powered, rebuilt or re-fueled diesel equipment.

This EAC area continues to support these efforts. One large industrial facility has replaced 50 old diesel forklifts with new propane-powered forklifts. A rock quarrying facility uses on-road diesel fuel in their off-road diesels. A county landfill uses both cetane additives and on-road fuel in their off-road equipment. Though the reductions from these efforts are not easily quantified, they

show a growing recognition that there are actions that can reduce emissions that are economically feasible.

The Chattanooga-Hamilton County Air Pollution Control Board sought a federal grant from US EPA for a grant to retrofit diesel school buses in the local area. Our application was not selected for funding. At this time we are discussing the possibility of a regional grant for school bus retrofit to show that retrofit will actually work without adverse consequences. This would encourage others to implement retrofit programs. We are also pursuing a possible funding source for diesel retrofits for public works vehicles.

The remaining local control measures being considered in the Tennessee portions of the Chattanooga EAC area are the following:

1. Lowering Truck Speed Limits on the interstates to 55 miles per hour;
2. Stage 1 Vapor Recovery;
3. Additional open burning restrictions; and
4. Support Tennessee's effort to develop a NOx Reasonable Available Control Technology rule for large industrial sources.

Possible reductions from these control measures have been evaluated. All of the controls are to be implemented in the entire Tennessee portion of the EAC area with the exception of the NOx RACT rule. The NOx RACT would apply only in Hamilton County since there are no industrial sources that have sufficient potential to emit to be subject to the rule in other Tennessee counties in the EAC. Open burning restrictions are presently in place in Hamilton County. Open burning restrictions would be needed in all of the other Tennessee counties in the EAC.

### **Likely Implementation Dates**

All control measures will be adopted so that they can be implemented for the ozone season of 2005. Regulatory actions necessary will be completed in accordance with the EPA's timelines as set forth in the EAC guidance issued by EPA.

### **Reductions in Precursors**

We have estimated the following precursor reductions in tons per day can be generated from all the counties in the EAC area, but we note that specific reductions from Walker and Catoosa Counties, Georgia, would be as a result of local control measures undertaken by those counties in conjunction with the Georgia Dept. of Environmental Protection which we understand will submit a progress report for the Georgia counties supporting the Chattanooga Area Early Action Compact:

<b><u>Control Measure</u></b>	<b><u>County</u></b>	<b><u>VOC</u></b> (tons per day)	<b><u>NO<sub>x</sub></u></b> (tons per day)
Reduce truck speed limit on	Hamilton		1.8

<b>Control Measure</b>	<b>County</b>	<b>VOC</b> (tons per day)	<b>NO<sub>x</sub></b> (tons per day)
Interstates to 55 mph	Marion		1.7
	Meigs		0
	Walker		0
	Catoosa		0.4
Stage 1 Vapor Recovery	Hamilton	1.47	
	Marion	0.49	
	Meigs	0.06	
	Walker	0.52	
	Catoosa	0.80	
Open Burning Restrictions	Hamilton	1.662	0.58
	Marion	0.298	0.10
	Meigs	0.119	0.04
	Walker	0.657	0.22
	Catoosa	0.573	0.20
Ozone Action Days	EPA allows credit of 3% of the reductions needed for attainment		
Tennessee NO <sub>x</sub> RACT Rule (No sources in other counties)	Hamilton		1.16

**December 2003 Progress Report**  
**For the Tennessee Early Action Compact Area containing**  
**Memphis Metropolitan Statistical Area**  
**MEMPHIS & SHELBY COUNTY and CRITTENDEN COUNTY COMPONENTS**

Prepared by Diane L. Arnst, Technical Manager  
Pollution Control Section, Memphis & Shelby County Health Department

[Separate Reports May Be Submitted by Fayette County and Tipton County,  
Tennessee; and by DeSoto County, Mississippi]

**Progress in Stakeholder Development Process**

Roles and Responsibilities: Representatives of the Memphis & Shelby County Health Department met with representatives of the West Memphis Metropolitan Planning Organization, the Arkansas Department of Environmental Quality, the DeSoto County Planning Division and the Mississippi Department of Environmental Quality at the DeSoto Civic Center on July 24<sup>th</sup> to further discuss roles and steps. An employee of each representative was designated to standardize emissions reductions calculation methods. Elliott Bickerstaff, Tony Davis, and Bob Rogers will participate along with other employees through conference calls.

Lists of Stakeholders Lists were sent as attachments to the First Progress Report. In addition, a list of Airport stakeholders is attached to this report.

**Stakeholder Meetings and Conference Calls Held To Date:**

7/8/03	Early Action Compact Presentation to Academy of Certified Hazardous Materials Managers by Bob Rogers
7/9/03	Afternoon meeting of MPO Committee meeting to rank Congestion Mitigation and Air Quality (CMAQ) projects with some ranking points related to Early Action Compact; Memphis and Shelby County Health Department Pollution Control Section participated
7/15/03	Afternoon meeting at Memphis International Airport of Airport Authority stakeholders
7/16/03	Afternoon follow up meeting on ranking of CMAQ projects; Memphis and Shelby County Health Department Pollution Control Section participated
7/23/03	Afternoon meeting with Cummins Manufacturing on Early Action Compact options; Cummins to report back on fleet options related to "NOx Flash" and diesel retrofit
7/31/03	Morning meeting with Commissioner Betsy Child, Tennessee Department of Environment and Conservation (TDEC); representatives of Premcor Refining, Inc.; Jim Chaney, TDEC Memphis Environmental Assistance Center Manager; and Memphis and Shelby County Health Department representatives on Early Action Compact control strategies
7/31/03	Afternoon meeting with Tennessee Valley Authority representatives to follow up earlier meetings; discussion of cost effectiveness and feasibility of three control strategies
8/8/03	Meeting with Federal Express Corporation Environmental Compliance staff to explore emission reduction strategies

8/14-15/03	Arkansas-Tennessee-Mississippi Ozone Study Technical Committee meeting in Nashville to review the second episode and determine sensitivity runs that best suit the Early Action Compact process
8/29/03	Teleconference with Tennessee Valley Authority on Early Action Compact Modeling issues
9/9/03	Afternoon meeting at DeSoto Civic Center of Memphis Metropolitan Statistical Area representatives of Crittenden, DeSoto, and Shelby Counties, and States of Arkansas, Mississippi and Tennessee
9/12/03	Conference call with U.S. EPA Region IV on ozone air quality planning area boundaries
9/16-17	Meeting at Paris Landing, Tennessee of Tennessee Director with the four local program directors on a variety of issues, including Early Action Compact issues
10/2/03	Ozone 101 for Mayors Luncheon PowerPoint Presentation, followed by afternoon ATMOS Technical Committee Meeting, Shelby Farms, Memphis, Tennessee
10/3/03	ATMOS Policy Committee morning meeting, Shelby Farms, Memphis, Tennessee
10/16/03	Meeting with Premcor Refining to discuss Early Action Compact low-volatility gasoline feasibility throughout Metropolitan Statistical Area
10/20/03	Lydia Wegman, U.S. EPA, presentation to STAPPA/ALAPCO in San Francisco, California concerning Interstate Transport Rule development, 8-hour ozone implementation strategy, and Early Action Compacts attended by Dwight Wylie and Diane Arnst
10/28-30/03	Fall State/Local Directors Meeting with EPA Region IV, Gulfport, Mississippi discussion of Early Action Compacts
11/4/03	Luncheon meeting with Meteorologists on ozone and PM forecasting, current designation status
11/14/03	ATMOS Technical Committee Meeting, Shelby Farms, Memphis, Tennessee
11/18/03	ACHMM conference on ambient air quality with presentations by Health Department, Arkansas DEQ, EPA Region VI, and Mississippi DEQ in West Memphis, Arkansas
12/4/03	Meeting with TVA representatives concerning NOx SIP Call permit conditions in Draft Title V Permit to claim creditability for Early Action Compact; preceded by conference call with Steven Stout, Esquire, concerning permit conditions in State's TVA Title V permits; and preceded by conference call with U.S. EPA's Karen Borel and others on NOx SIP Call permit conditions creditability issue
12/10/03	Updated Memphis and Shelby County Air Pollution Control Board on Early Action Compact modeling efforts and South Coast ordinance requiring Low NOx water heaters
12/10/03	Bob Rogers updated the Tennessee Air Pollution Control Board on Memphis EAC status
12/15/03	Conference call with Kay Prince, Dick Schutt, and Brenda Johnson at EPA Region IV concerning creditability of TVA NOx SIP Call emission reductions for purposes of attainment demonstration

The Health Department has also sent a representative to numerous Metropolitan Planning Organization meetings.

Dwight Wylie has expressed his intent to submit a separate discussion of Stakeholder Meetings in DeSoto County.

### **Progress in Emission Reduction Measure Selection**

**Idling Emission Reductions:** Petro Stopping Center completed installation of IdleAire equipment on 41 parking truck spaces by June 30, 2003. **Estimated emission reductions: 16 TPY NOx [.04 Tons Per Day].**

DRAFT TITLE V Permit condition negotiations continue with TVA. DRAFT **Ozone Action Day condition** to require TVA to turn on the Selective Catalytic Reduction controls when ozone exceedances are predicted for a given day during April or October appear to be acceptable to TVA representatives. CEMs would provide real data should the Ozone Action Day operation of SCR occur, which would be well within the 3% voluntary stationary source measures cap.

Negotiations continue with TVA on language to make the NOx SIP Call emission reductions during the control period May 1 through September 30 enforceable and creditable for an Attainment Demonstration. EPA Region IV representatives stated on December 15, 2003, that a SIP-enforceable limit on the TVA Allen Steam Plant must be included in its Title V Operating Permit in order to match the SAI, Inc. computer modeling used for the Attainment Demonstration. A Draft Permit Condition will be shared with Karen Borel of EPA Region IV on December 18<sup>th</sup> at the ATMOS/EAC meeting in Nashville.

**ExxonMobil** representatives informed the Memphis & Shelby County Health Department that its gasoline is barged in from its Baton Rouge refinery, and **beginning January 1, 2004, the gasoline it supplies will meet Tier II sulfur reduction requirements.** ExxonMobil is to provide the Health Department with information about the Reid Vapor Pressure and the number of gallons it supplies, by county, by month during ozone season, to the Memphis MSA. The Health Department will quantify expected emissions reductions and explore what mechanism is needed to demonstrate these emission reductions for the EAC process.

On July 31<sup>st</sup>, Gerald Bram, Plant Manager for **Premcor Refining, Inc.** committed orally to supplying Tier II low sulfur gasoline by the end of the first calendar quarter of 2004, but subsequently Jim Fedena of Premcor has stated that this fuel will not be supplied in the Memphis MSA until the first quarter of 2005. Premcor has submitted a construction permit modification application to the Health Department related to this project. Mr. Bram and Mr. Fedena have stated that it is technically feasible for Premcor to supply **7.8 psi (low-volatility) gasoline throughout the Memphis MSA (Crittenden, DeSoto, Fayette, and Tipton Counties)** at an added cost of about one cent per gallon. Mississippi and Arkansas are working with their legislatures to obtain legal authority to be “more stringent than” Federal requirements. Premcor would need the counties requiring low-volatility gasoline to make it a requirement that only 7.8 psi gasoline be sold during the specified months; otherwise competitors could perhaps sell 9.0 psi gasoline for slightly less per gallon and consumers may not choose to purchase the Premcor product. Quantification efforts estimate that **80 to 100 Tons of VOC reductions per ozone season, or 0.18 Tons Per Day VOCs.**

**Lion Oil** representatives told the Health Department it cannot supply low volatility gasoline to the Memphis MSA and will not supply Tier II Low sulfur gasoline to the Memphis MSA prior to the Federal deadline.

**Stage I Vapor Controls throughout the Memphis MSA (Crittenden, DeSoto, Fayette, and Tipton Counties) would achieve an estimated 2.11 Tons Per Day VOCs reductions per ozone season.**

The **Airport Authority has electrified all gates with a 400 hertz electrical system that provides power for heating, cooling and other electrical needs of the planes while parked at the gates** (similar to truck stop electrification). This was done in the mid-1980s.

The **Airport Authority has just completed construction of an Automated Vehicle Identification System (AVI)** at a cost of \$1 million funded by the Authority. It is undergoing testing and a baseline will be developed by the end of 2003. The AVI measures “dwell time” (**idling time**) at the curb by shuttles and taxis. In 2004, the Airport Authority will offer financial incentives for reduced dwell time. Bob Rogers is working to quantify **these emission reductions for 2004, 2005, 2006 and 2007.**

The **Airport Authority** has planned a **Consolidated Ground Transport Facility**, but the project is on hold due to depressed passenger use of the airport in 2002-2003. A parcel of land is already owned by the Airport Authority for this project. It would eliminate 80% of the shuttles form rental car agencies that would be relocated to this parcel. Rental car agencies would contract with the AA and pay a fee. Construction of the facility would be costly. **If the construction timeframe coincides with the EAC timeframe, these emission reductions could be quantified for 2005, 2006, and 2007.**

**Hybrid vehicles** are used to fuel planes at the **Airport** instead of diesel heavy-duty trucks. **Associated emissions reductions may be quantifiable for 2005, 2006 and 2007 and Bob Rogers is exploring this.**

**FedEx** uses a **Conveyor System** at Airport Gates instead of tugs. The Health Department will quantify expected emissions reductions and explore what mechanism is needed to demonstrate these emission reductions for the EAC process.

**Northwest and FedEx** paid for installation of a **new underground fuel pipeline** from Arkansas under the Mississippi River to the Airport to increase the capacity and throughput of aviation fuel. **This has eliminated truck deliveries of aviation fuel to FedEx.** The Health Department will quantify expected emissions reductions and explore what mechanism is needed to demonstrate these emission reductions for the EAC process.

Global settlement negotiations between **Cargill** and **Solae** and a host of parties are occurring that are expected to result in **hundreds of tons of** reductions of emissions of VOCs and NOx in the Memphis MSA. The final implementation date for operation of control equipment by these facilities in Shelby County, TN is not yet established and may not be predictable for the purposes of modeling an Attainment Demonstration.

### Public Outreach Activities

The *Commercial Appeal* has published the following articles and editorials:

Memphis Business Journal article 11/28/03 entitled “ Air Quality at Memphis TVA Plant Helping Local Economy”

Article in Commercial Appeal 12/3/03 entitled “ Air Pollution Imperiling Quality of Life In Smokies, Experts Warn”

Article in Commercial Appeal 12/5/03 entitled “EPA Warns 5-County Metro Area”

Article in Commercial Appeal 12/8/03 entitled “Solutions Often Foggy On How To Clean Up That Smog”

Editorial 12/13/03 entitled “Memphis Smog: Not Just Local Concern”

Information about the Early Action Compact is on two websites:

[www.state.tn.us/environmenta/apc/eac](http://www.state.tn.us/environmenta/apc/eac) and

[www.co.shelby.tn.us/county\\_gov/divisions/health\\_serv/environ\\_health/air\\_pollution/index.htm](http://www.co.shelby.tn.us/county_gov/divisions/health_serv/environ_health/air_pollution/index.htm)

### Modeling and Technical Activities

SAI, Inc. the contractor for the Arkansas-Tennessee-Mississippi Ozone Study has selected a second 8-hour ozone exceedance episode for modeling (June 16-22, 2001) using EPA-approved models. Brenda Johnson, EPA Region IV, has participated in ATMOS meetings and served as a resource as modeling issues have been discussed by the ATMOS Technical Committee. Both a 12-day episode in 1999 and a second 7-day episode in 2001 have been modeled by SAI, Inc. At the August 14-15 meeting in Nashville, SAI, Inc. presented its modeling results. Further refinements to the model were made and the option of “tagging” was explained on October 3. Four “tags” were selected to determine the contribution of mobile sources on exceedance days, and to determine how DeSoto, Crittenden, and Shelby Counties were contributing to each others’ exceedances. SAI, Inc. presented the “tagging” modeling results to the ATMOS Technical Committee on November 14.

The natural gas pipeline industry group also met with the Tennessee Technical Secretary with corrected emissions figures for emissions from these sources. This industry group pointed out that the modeled emissions were significantly higher than the information they possess (by a factor of approximately 3). SAI, Inc. was provided with corrected information. The corrected modeling results are to be presented December 18<sup>th</sup>.

Discussion of Attainment Demonstrations versus “weight of evidence” demonstrations occurred at the November 14<sup>th</sup> meeting.

## Airport Stakeholders

Alton Lanier, Memphis-Shelby County Airport Authority

Larry Cox, MSC Airport Authority

Bob Martin, MSC Airport Authority

Scott Brockman, MSC Airport Authority

Robert Beesley, MSC Airport Authority—Development

Randy Womack, Esquire, MSC Airport Authority

Russ Noble, Millington Municipal Airport

John Baxter, FedEx

Allison Bird, FedEx

Robert Hartwein, Wilson Air Center

Scott David, Signature Flight Support

Jim Pearson, Signature Flight Support

Tennessee Air National Guard

Swift Courier Service

**December 2003 Progress Report  
for the Haywood County Early Action Compact Area**

At this time, Haywood County chooses to remain a part of the Early Action Compact process even though it is likely they will be able to achieve attainment of the 8-hour ozone standard.

There are ongoing discussions with local truck stops to determine the interest/commitment for truck stop electrification.

Listed below are the potential EAC Control measures under consideration. The final list will be submitted by March 31, 2004, with implementation of any specific final control measures by 2005.

Control Measures under consideration are as follows:

1. Truck stop electrification / Anti-idling regulation
2. Discuss with local school board/anti-idling regulation
3. Encourage city/county and local school board to use cleaner fuels
4. Support giving preference to bidders on state jobs with re-powered, rebuilt or refueled diesel equipment
5. Open burning restrictions on Ozone Action Days
6. Propose an air quality Action Day in conjunction with Earth Day
7. Public education at community events
8. Support the enforcement of the smoking vehicle regulation to remove gross emitters from road
9. Support federal legislation to enhance (Air Quality Standards)
10. Student outreach through education systems; educate future drivers on the impact of motor vehicles on the environments

**EARLY ACTION COMPACT DECEMBER PROGRESS REPORT  
FOR THE  
MIDDLE TENNESSEE REGION**

This progress report is being submitted for Davidson, Cheatham, Dickson, Robertson, Rutherford, Sumner, Williamson and Wilson counties in Middle Tennessee. It reflects activities of the Metro Nashville/Davidson County Public Health Department, Pollution Control Division (PCD), as well as the Nashville Area Metropolitan Planning Organization (MPO) and individual cities and counties in the region. Major milestones established for the Middle Tennessee EAC are shown in section 3.2.1 Milestones and Reporting, Table 2 of the report Early Action Compact for the State of Tennessee and Nashville MSA.

The last progress report was submitted in June 2003. It included a summary of the progress to date and the likely list of control measures being considered by the PCD. During the time from June 2003 until December 2003, much work has been undertaken. Milestones to have been achieved during this timeframe were:

- Base case/Future case modeling completed
- Control scenarios modeling completed

The base case and future case modeling have largely been completed. However, minor adjustments are made as opportunities are identified to improve the emissions inventory.

Systems Applications International (SAI), who is the contractor for the Arkansas, Tennessee and Mississippi Ozone Study (ATMOS) is currently completing modeling of the second emission reduction scenario. Based on initial modeling results, the 2007 estimated design value for the Middle Tennessee area is slightly less than 0.085 ppm. This estimated design value resulted from the application of only the Federal emission reduction rules including:

- National Low Emission Vehicle (NLEV) rule
- NO<sub>x</sub> standard for Heavy Duty Diesel Vehicles (HDDV)
- Tier 2 vehicle and gasoline fuel sulfur standards
- Diesel fuel sulfur standards

Even though initial modeling results indicate a favorable 2007 estimated design value, all eight counties are continuing their commitment to remain active partners in the Middle Tennessee EAC. In addition to the specified milestones, the Compact partners have been working closely to finalize a list of control options that will be implemented to reduce ozone precursors. Additional work needs to be done to refine the estimated emission reductions from each of the measures. This work will be completed in early 2004.

The PCD has made progress reports to the Metropolitan Board of Health and the Tennessee Department of Environment and Conservation (TDEC) Air Pollution Control Board on the status of the Davidson County portion of the EAC. The Nashville Area MPO has evaluated and selected control measures based on discussions among its Executive Board, which is comprised of the chief elected officials of Davidson, Rutherford, Sumner, Williamson and Wilson counties. The attached spreadsheet shows the control measures selected by the five counties in the MPO, as well as additional measures proposed solely by Davidson County.

Control measures are still being finalized in Cheatham, Dickson and Robertson counties. Dickson and Robertson counties have retained a consultant who has participated in the MPO's discussions, and the MPO staff has remained in periodic contact with all three counties for coordination. Chief elected officials from the three non-MPO counties attended the MPO board meeting where final control measures were discussed and voted on, and contributed to the discussion. It has been proposed that all eight counties develop a forum where air quality issues can be discussed separately from the MPO process.

At this point it is likely that Cheatham, Dickson and Robertson counties will help support regional rideshare programs and the regional Air Quality Action Day program. At the local level they will likely fund new greenways and bikeways and work on policies to reduce school bus idling. At the state level, they support the same three control measures recommended by the five MPO counties, except that they would recommend vehicle I/M programs be instituted in all Tennessee counties where population density makes it cost-feasible.

This submittal should satisfy the requirement for participants in the EAC to submit semiannual progress reports in order to remain in the EAC and for EPA to continue to defer nonattainment requirements. If there are any questions concerning the Davidson County portion of this submittal, please contact Rob Raney or Fred Huggins at 615-340-5653. If there are any questions related to the remainder of the submittal, please contact Ms. Jeanne Stevens at 615-862-7204.

**December 2003 Progress Report  
for the Putnam County Early Action Compact Area**

At this time, Putnam County chooses to remain a part of the Early Action Compact process even though it is likely they will be able to achieve attainment of the 8-hour ozone standard.

Listed below are the potential EAC Control measures under consideration. The final list will be submitted by March 31, 2004, with implementation of any specific final control measures by 2005.

Control Measures under consideration are as follows:

1. Support evaluation of an IM program EAC-wide regulation
2. Support statewide NO<sub>x</sub> RACT low NO<sub>x</sub> combustion control
3. Encourage accelerated replacement with newer lower emitting vehicles for both on-road HDDV and buses and on and off-road diesel vehicles
4. Support the use of Cetane diesel fuel additives
5. Consider traffic signalization/synchronization and roadside assistance/incident management program for on-road vehicles
6. Support designating an "Air Quality Action Day"
7. Posting signs at truck stops to encourage no idling
8. Ban open burning on ozone action days
9. Student outreach through education
10. Public education at community events
11. Air Quality Web page
12. Speed limit reduction on big trucks on ozone action days
13. No idle rule for school buses

## **December 2003 Progress Report for the East Tennessee Tri-Cities Early Action Compact Area**

The Ozone Action Partnership (OAP) (chaired by Gary Mayes, Director, Sullivan County Regional Health Department) has been charged with developing recommendations for the local officials. OAP is a committee of the First Tennessee Development District and report to the District's Executive Board (county and city mayors).

The Ozone Action Partnership met on October 14 and November 18 to discuss local control measures.

The First Tennessee Development District Executive Board (county and city mayors) met on November 19 and approved the list of measures for the next round of modeling (included in their November 20th letter).

The Tri-Cities design value for 2000-2002 is 92 ppb. Based on the latest ATMOS modeling, this is projected to decrease to 88 ppb by 2007. This is a reduction of 4.3%.

Due to favorable weather in 2003(over 20 inches above normal rainfall), the design value for 2001-2003 is 86 ppb. Applying the same 4.3% reduction would bring our modeled 2007 design value down to 82 ppb. Thus, attainment should be achieved with just the coming federal measures. Some would claim their Ozone Action Day program, TVA reductions, and Eastman reductions explain part of the improved results for 2003. How much is weather related and how much emissions related is open to debate and basically an unknown.

Since the EAC area understands the attainment demonstration has to use the 2000-2002 design value (straddling the 2001 inventory baseline case), it is understood, that they must use the "weight-of-evidence" option to gain the non-attainment deferral. The improved 2001-2003 design value would be the first weight placed on the scale.

The second is the 3 year old Ozone Action Day program, which they plan to continue.

In response to a request by Barry Stephens to the EAC's to instruct the ATMOS modelers on the wishes for local measures to be included in the most recent round of modeling, the OAP recommended, and the five EAC county mayors (Sullivan, Hawkins, Washington, Carter, and Unicoi) approved, the following measures to be modeled:

- Ozone Action Day program resulting in a 1% VMT reduction in the five counties
- Open burning ban on "Ozone Action Days"
- Vehicle emission testing program in Sullivan (150,000 pop) and Washington (110,000 pop) counties
- Prohibition of motor vehicle tampering via state regulation
- Prohibit smoking vehicles via state regulation
- Limit idling of motor vehicles to 3 minutes via state regulation

These all amount to a 2 tpd reduction in EAC NO<sub>x</sub> emissions and represent a 3.4% reduction in low-level NO<sub>x</sub>. Also, we get 5 tpd VOC reductions. While these reductions may not show up in the model, we believe they will make a difference and are weight on the scale - hopefully enough weight to gain the deferral.

The rationale for I/M is as follows:

- Ground level reductions in NO<sub>x</sub>, VOC, and CO
- The Nashville experience shows that it works
- We thought it would be practical in counties with population over 100,000
- It is doable if the General Assembly were to authorize it
- Will help on PM<sub>2.5</sub> (Sullivan County monitor is reading 15.7>15)

Due to ease of travel around their region, they do not see much opportunity for VMT reductions from rideshare programs or mass transit. They have some Transportation Control Measures in the works (signal and intersection improvements), but these would be very small reductions and hard to quantify. Stage I and II gasoline vapor recovery was dropped because VOC reductions alone are thought to be of marginal benefit. They did not think lowering the interstate speed limits on Ozone Action Days would be practical due to signage problems.

Washington County Mayor George Jaynes and his consultant, Rick Sinclair, also addressed the Board on December 10th. Basically, they spoke in favor of EACs, but were opposed to non-attainment designation for Washington County.

Points made were that there is no monitor in Washington County and very little coal is burned in the county. Mayor Jaynes' view is that if I/M is needed, it should come from Nashville.